

Title (en)  
ATMOSPHERIC PRESSURE NON-THERMAL PLASMA DEVICE TO CLEAN AND STERILIZE THE SURFACE OF PROBES, CANNULAS, PIN TOOLS, PIPETTES AND SPRAY HEADS

Title (de)  
VORRICHTUNG MIT NICHTTHERMISCHEM ATMOSPÄRENDRUCKPLASMA ZUR REINIGUNG UND STERILISATION DER OBERFLÄCHE VON SONDEN, KANÜLEN, STIFTWERKZEUGEN, PIPETTEN UND SPRITZKÖPFEN

Title (fr)  
DISPOSITIF UTILISANT UN PLASMA NON THERMIQUE A PRESSION ATMOSPHERIQUE POUR NETTOYER ET STERILISER LA SURFACE DE SONDAS, CANULES, INSTRUMENTS A TIGES EVIDEES, PIPETTES ET TETES DE PULVERISATION

Publication  
**EP 1631701 A4 20090107 (EN)**

Application  
**EP 04753944 A 20040528**

Priority  
• US 2004017223 W 20040528  
• US 47841803 P 20030616

Abstract (en)  
[origin: WO2005000363A2] The present invention relates to methods and apparatuses for the use of atmospheric pressure non-thermal plasma to clean and sterilize the surfaces of liquid handling devices.

IPC 8 full level  
**C23F 1/00** (2006.01); **B08B 3/10** (2006.01); **B08B 7/00** (2006.01); **B08B 9/00** (2006.01); **B23K 9/00** (2006.01); **B23K 9/02** (2006.01); **C25F 5/00** (2006.01); **H01L 21/306** (2006.01); **H05H 1/24** (2006.01)

IPC 8 main group level  
**A61L** (2006.01)

CPC (source: EP US)  
**A61L 2/14** (2013.01 - EP US); **B01L 13/02** (2019.07 - EP US); **B08B 7/0035** (2013.01 - EP US); **B08B 9/00** (2013.01 - EP US); **H01J 37/32825** (2013.01 - EP US); **H05H 1/2406** (2013.01 - EP US); **H05H 1/246** (2021.05 - EP); **H05H 1/2465** (2021.05 - EP); **B01L 3/021** (2013.01 - EP US); **B01L 3/0244** (2013.01 - EP US); **B01L 2300/0838** (2013.01 - EP US); **G01N 35/1004** (2013.01 - EP US); **H05H 1/246** (2021.05 - US); **H05H 1/2465** (2021.05 - US); **H05H 2277/10** (2013.01 - EP US)

Citation (search report)  
• [X] JP 2001023968 A 20010126 - MATSUSHITA ELECTRIC WORKS LTD  
• [X] JP 2002110613 A 20020412 - MATSUSHITA ELECTRIC WORKS LTD  
• [A] JP 2003135571 A 20030513 - TOSHIBA CORP  
• [A] US 5225659 A 19930706 - KUSANO YUKIHIRO [JP], et al  
• [A] JP 2003020350 A 20030124 - NIPPON PAINT CO LTD  
• See references of WO 2005000363A2

Designated contracting state (EPC)  
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)  
**WO 2005000363 A2 20050106; WO 2005000363 A3 20050818; WO 2005000363 B1 20051103**; AU 2004251649 A1 20050106; CA 2528194 A1 20050106; CN 1806066 A 20060719; EP 1631701 A2 20060308; EP 1631701 A4 20090107; JP 2006527656 A 20061207; NZ 544139 A 20071026; US 2005005948 A1 20050113; US 2005139229 A1 20050630; US 2006081336 A1 20060420; US 2006102196 A1 20060518; US 7017594 B2 20060328; US 7094314 B2 20060822; US 7367344 B2 20080506

DOCDB simple family (application)  
**US 2004017223 W 20040528**; AU 2004251649 A 20040528; CA 2528194 A 20040528; CN 200480016841 A 20040528; EP 04753944 A 20040528; JP 2006517166 A 20040528; NZ 54413904 A 20040528; US 28985305 A 20051130; US 32327205 A 20051230; US 3962805 A 20050120; US 85827204 A 20040601